



California Environmental Protection Agency

 **Air Resources Board**



Purpose of tonight's meeting

- **Receive your comments on the draft health risk assessments**
- **Consultation to obtain your ideas on future emission reduction actions**

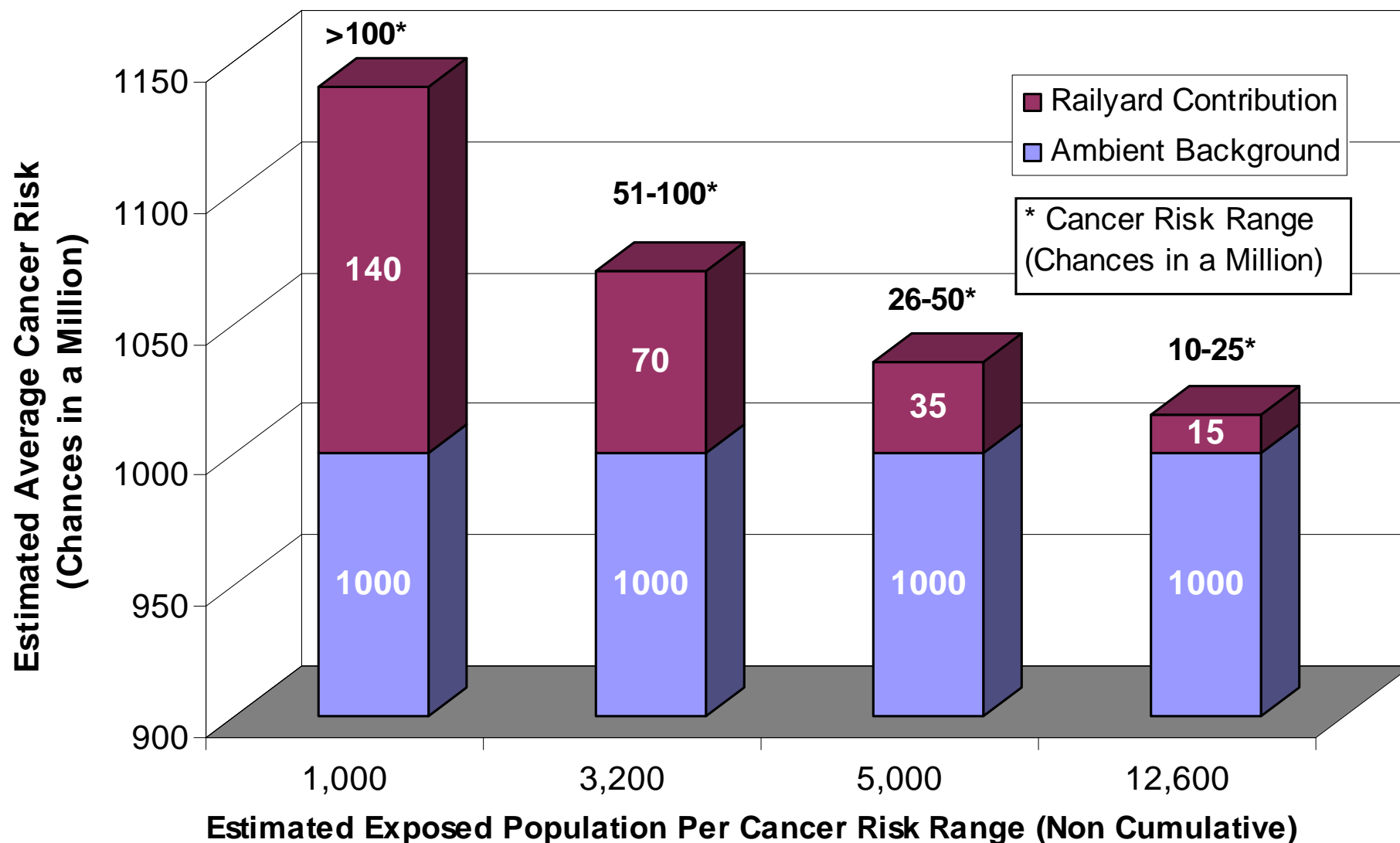


Background

- **This effort is part of our commitment to address pollution impacts on communities**
 - Implements the ARB Goods Movement Plan
 - Required by the ARB/UP/BNSF Railroad Agreement
- **The State's goals are to:**
 - Reduce exposure to diesel PM as quickly as possible
 - Reduce risks by at least 85 percent by 2020
 - Obtain the emission reductions needed to attain air quality standards



Summary of Health Risk Assessment Findings



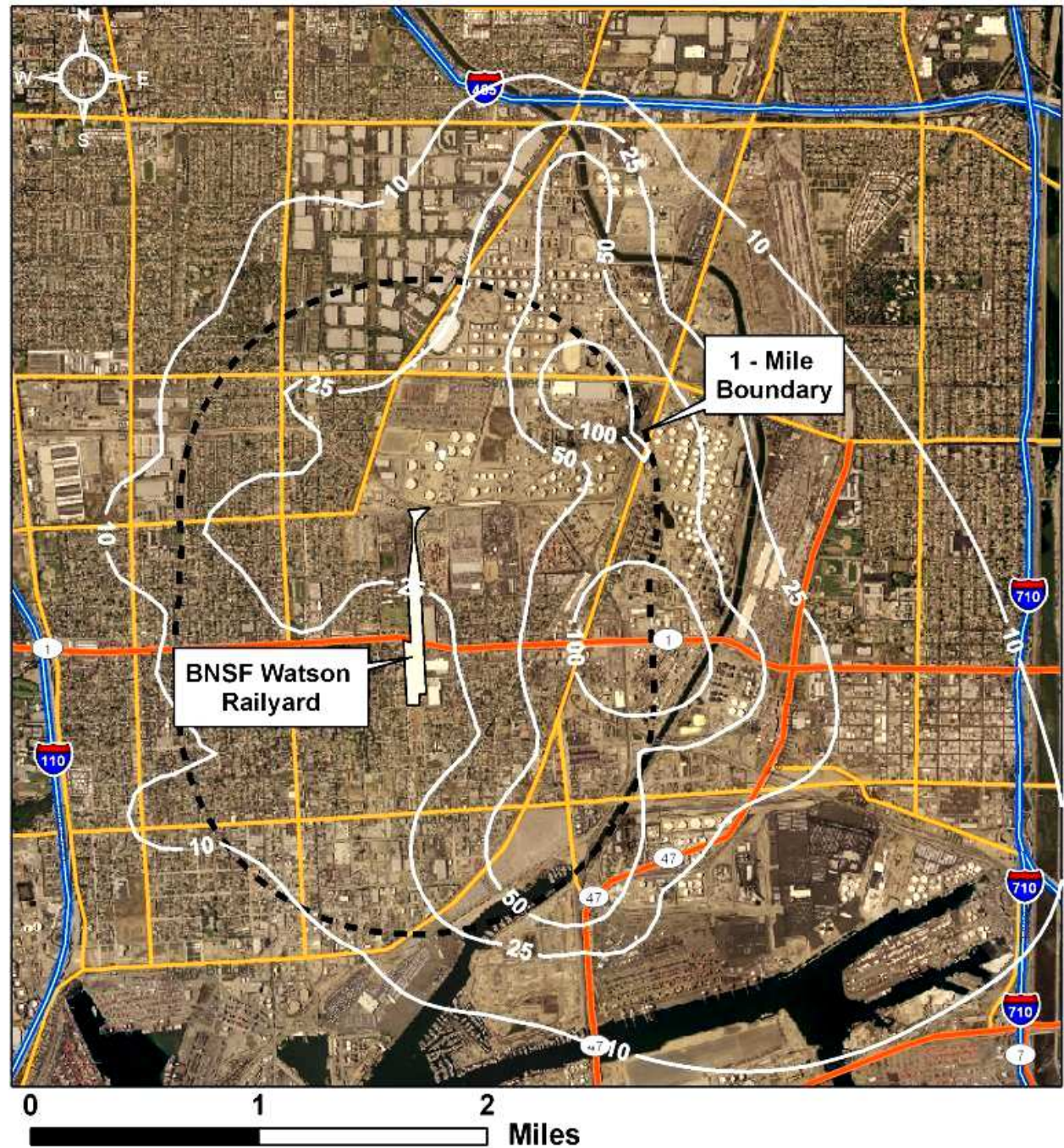
Findings:

Locations of Potential Cancer Risks due to the Railyard Diesel PM Emissions



Findings:

**Locations of
Potential Cancer
Risks
due to Non-
Railyard Diesel PM
Emissions**



Next Steps

- **Evaluate comments and complete the HRAs**
- **Evaluate feasible mitigation measures to reduce health risks**



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➤ ARB Railyard HRA Website:

- <http://www.arb.ca.gov/railyard/hra/hra.htm>

Actions to Reduce Health Risk



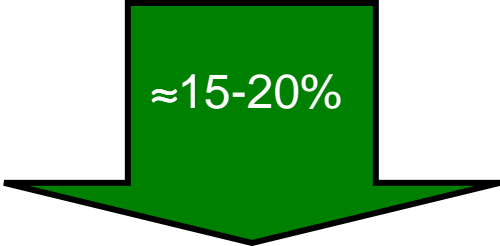
Approach to Reducing Emissions

- **ARB regulations**
 - **Fuels**
 - **Cargo handling equipment**
 - **Transport refrigeration units**
 - **Heavy-duty diesel on-road trucks and off-road vehicles**
- **U.S. EPA regulation**
 - **Locomotives**
- **Voluntary agreements**
 - **1998 South Coast/2005 Statewide**
- **Railroad yard locomotive replacement program**
- **Funding programs**
 - **Carl Moyer Incentives**

Benefits of California Railyard Diesel PM Emission Reduction Measures

➤ 2005-2007:

- CARB diesel fuel for intrastate locomotives
- 2005 railyard agreement



≈15-20%

➤ 2005-2010:

- Measures above plus:
- 1998 NOx locomotive fleet average agreement (South Coast)
- ARB cargo handling equipment regulation
- ARB on-road heavy-duty truck regulation
- ARB transport refrigeration unit regulation



≈40-50%

Progress Report - Existing Measures

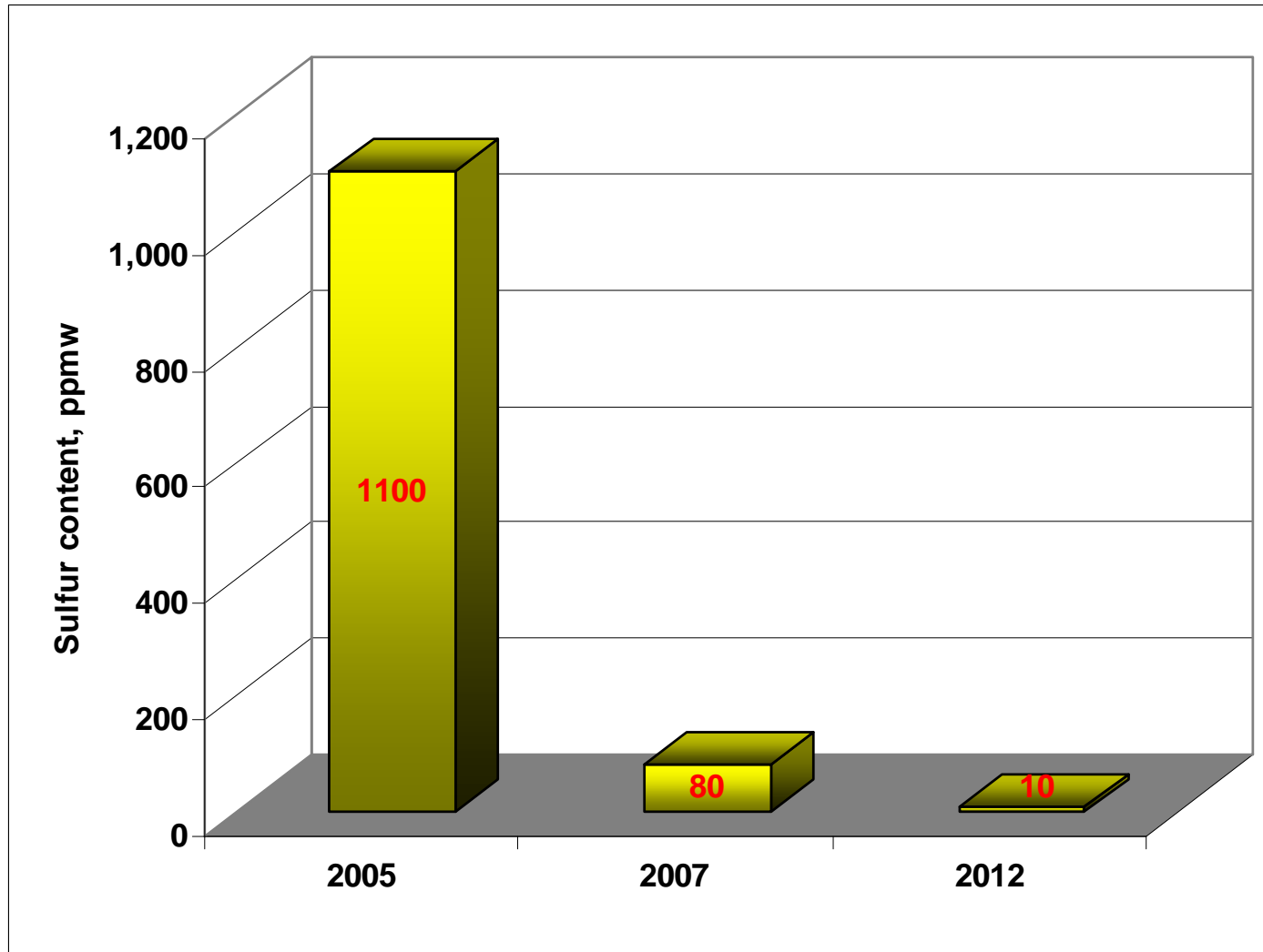
Diesel Fuel Standards

Fuel Type	Maximum Sulfur Level (ppmw)		Aromatics Maximum (% by volume)
	Prior	2006-2007	
CARB Diesel	500	15	10
EPA On-Road Diesel	500	15	35
EPA Non-road Diesel	5,000	500*	35

*** Lower to 15 ppmw in 2012.**

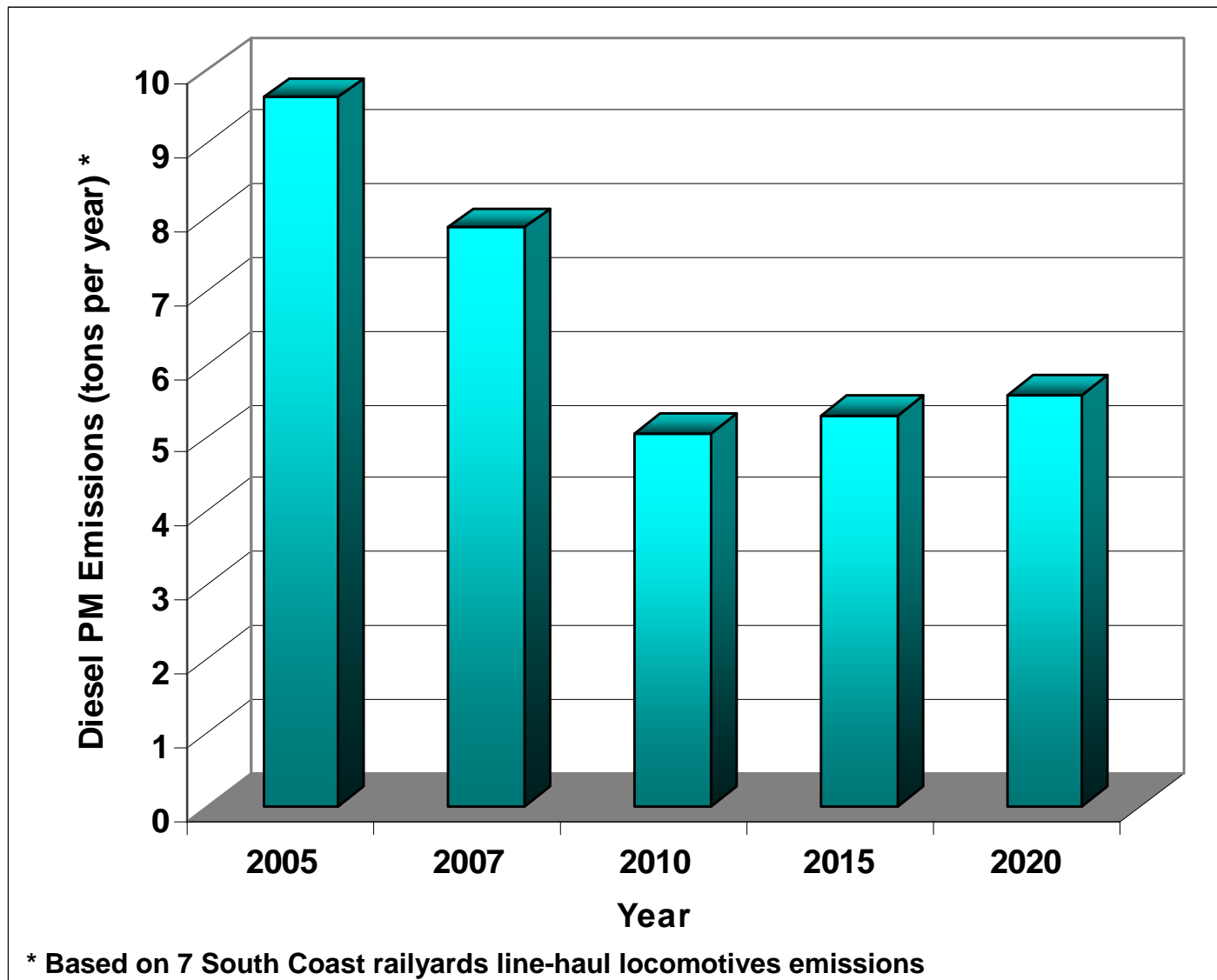
Progress Report - Existing Measures

Average Diesel Fuel Sulfur Levels Consumed by Locomotives in California



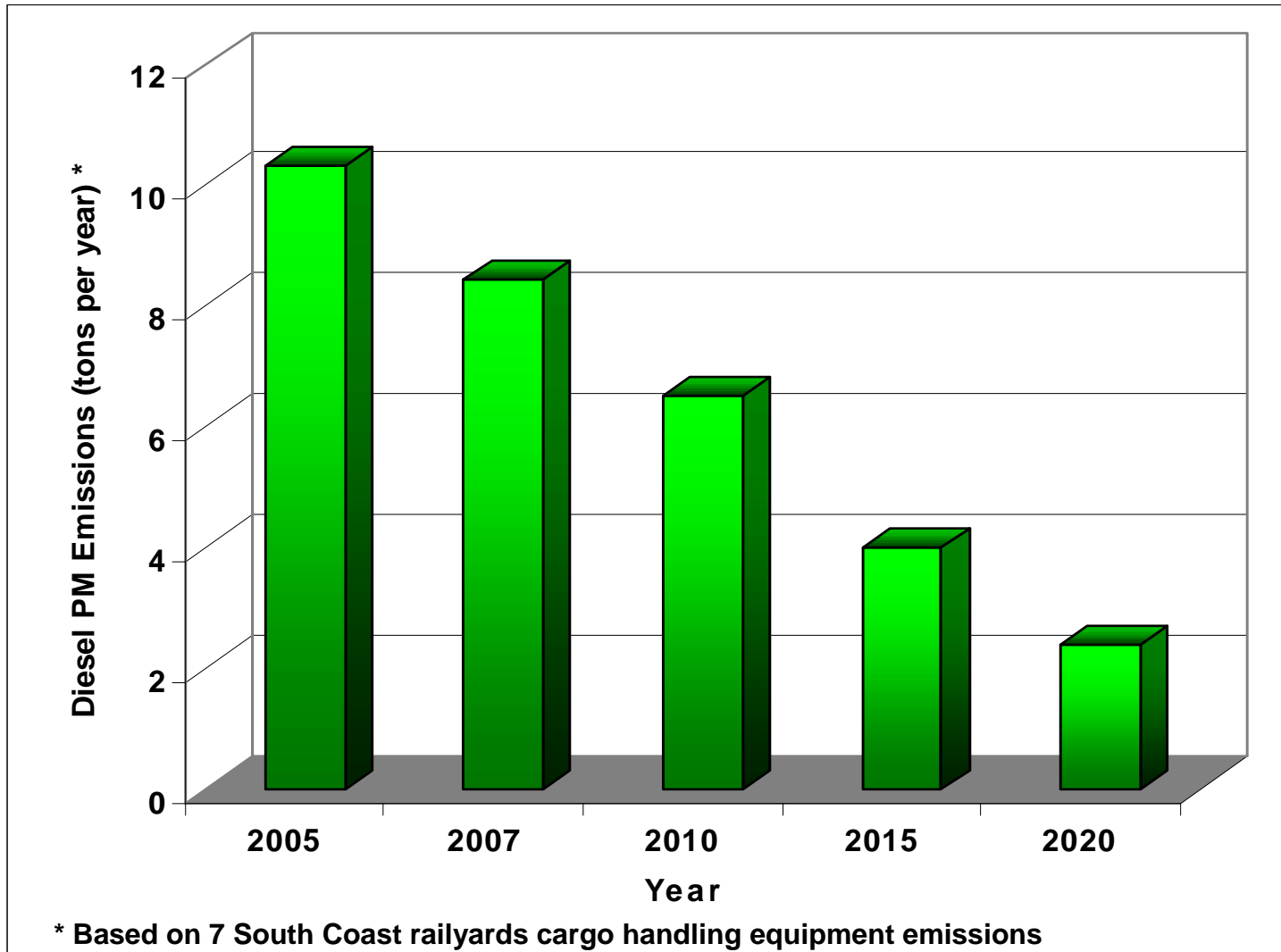
Progress Report - Existing Measures

South Coast Railyard Diesel PM Emission Reductions: Line-Haul Locomotives



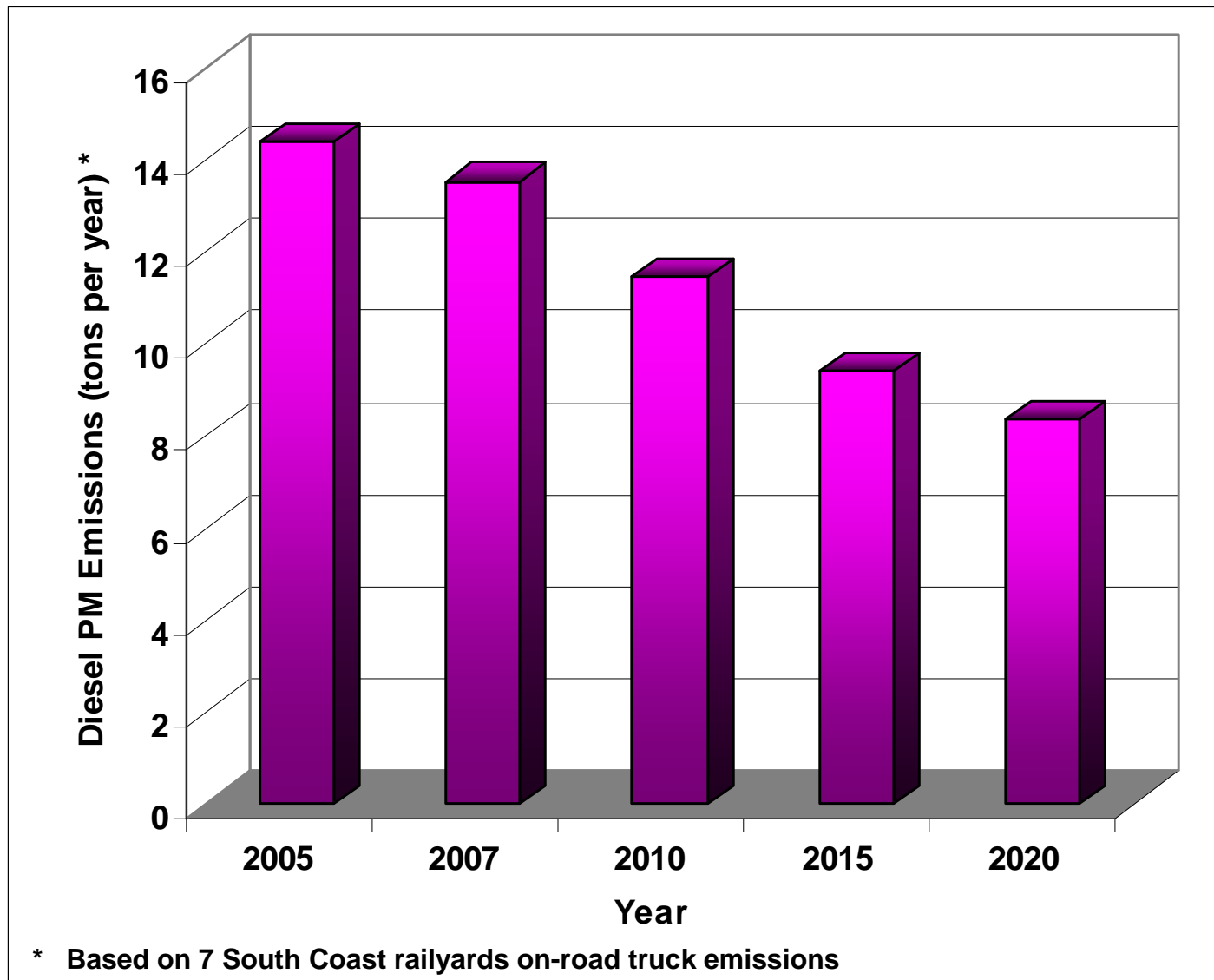
Progress Report - Existing Measures

South Coast Railyard Diesel PM Emission Reductions: Cargo Handling Equipment



Progress Report – Existing Measures

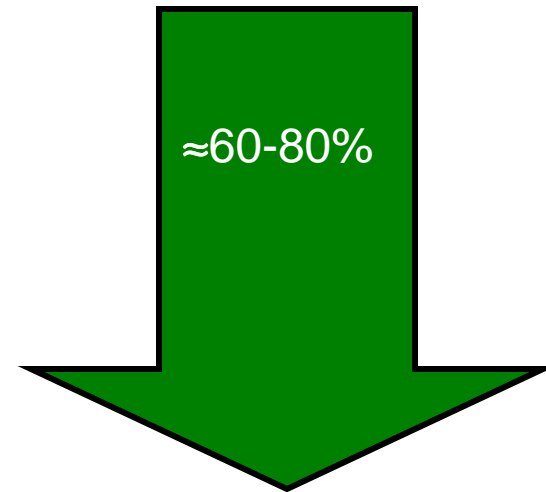
South Coast Railyard Diesel PM Emission Reductions: New On-Road Trucks



Possible Additional Measures

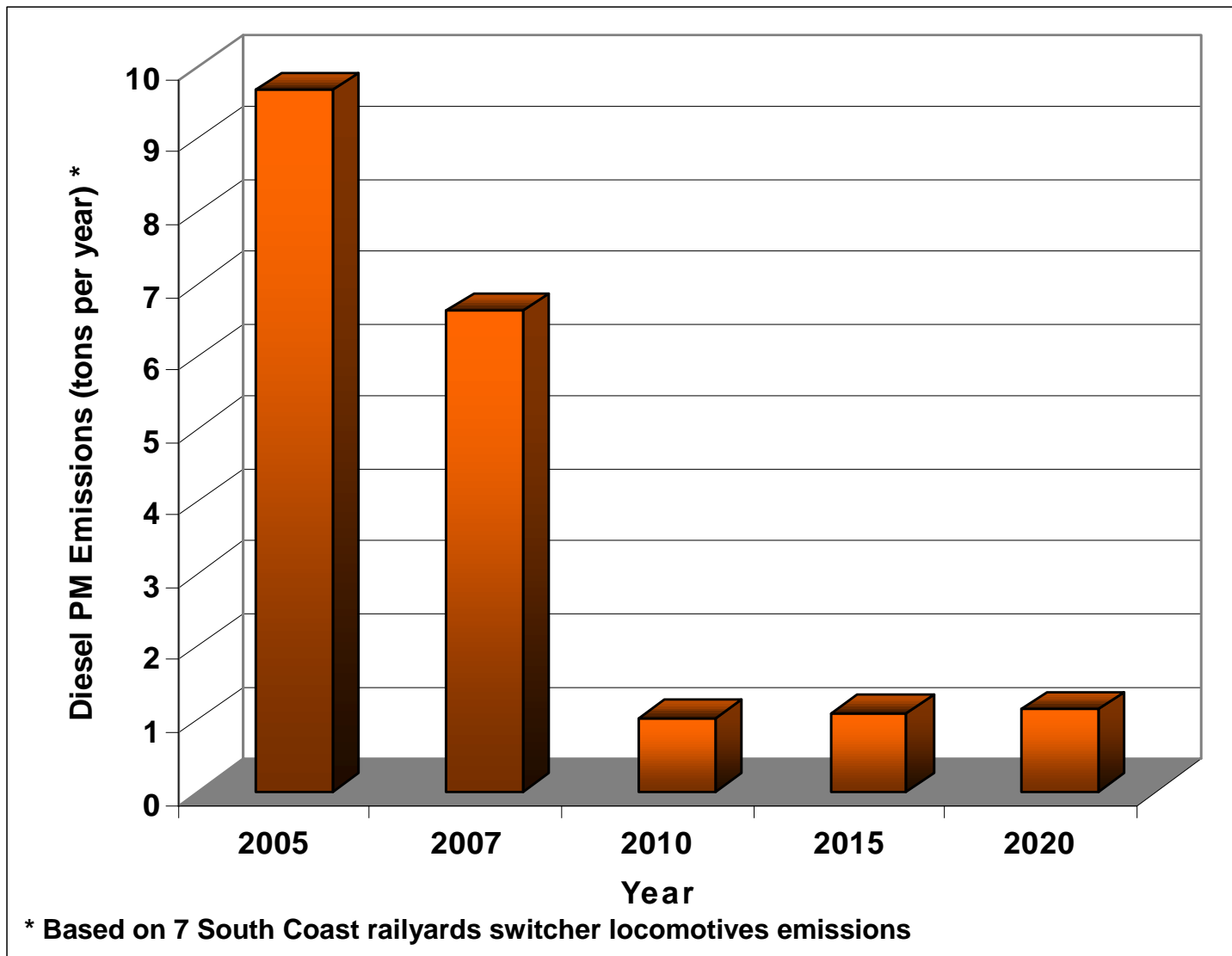
➤ 2005-2020:

- U.S. EPA locomotive rulemaking
- California replacement of switch locomotives
- ARB in-use truck measure



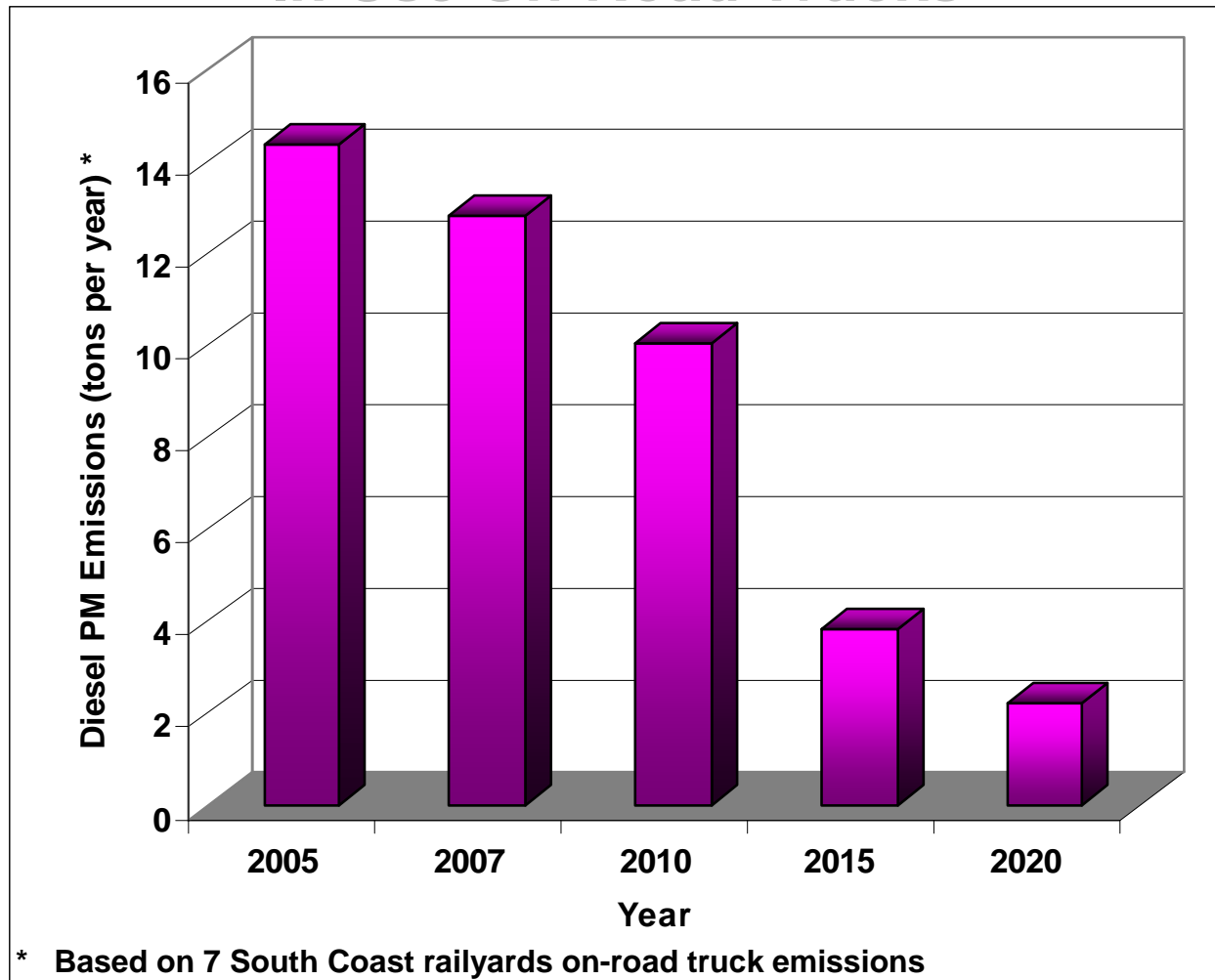
Progress Report – Potential Measures

South Coast Railyard Diesel PM Emission Reductions: Switcher Locomotive Replacement by 2010



Progress Report - Potential Measures

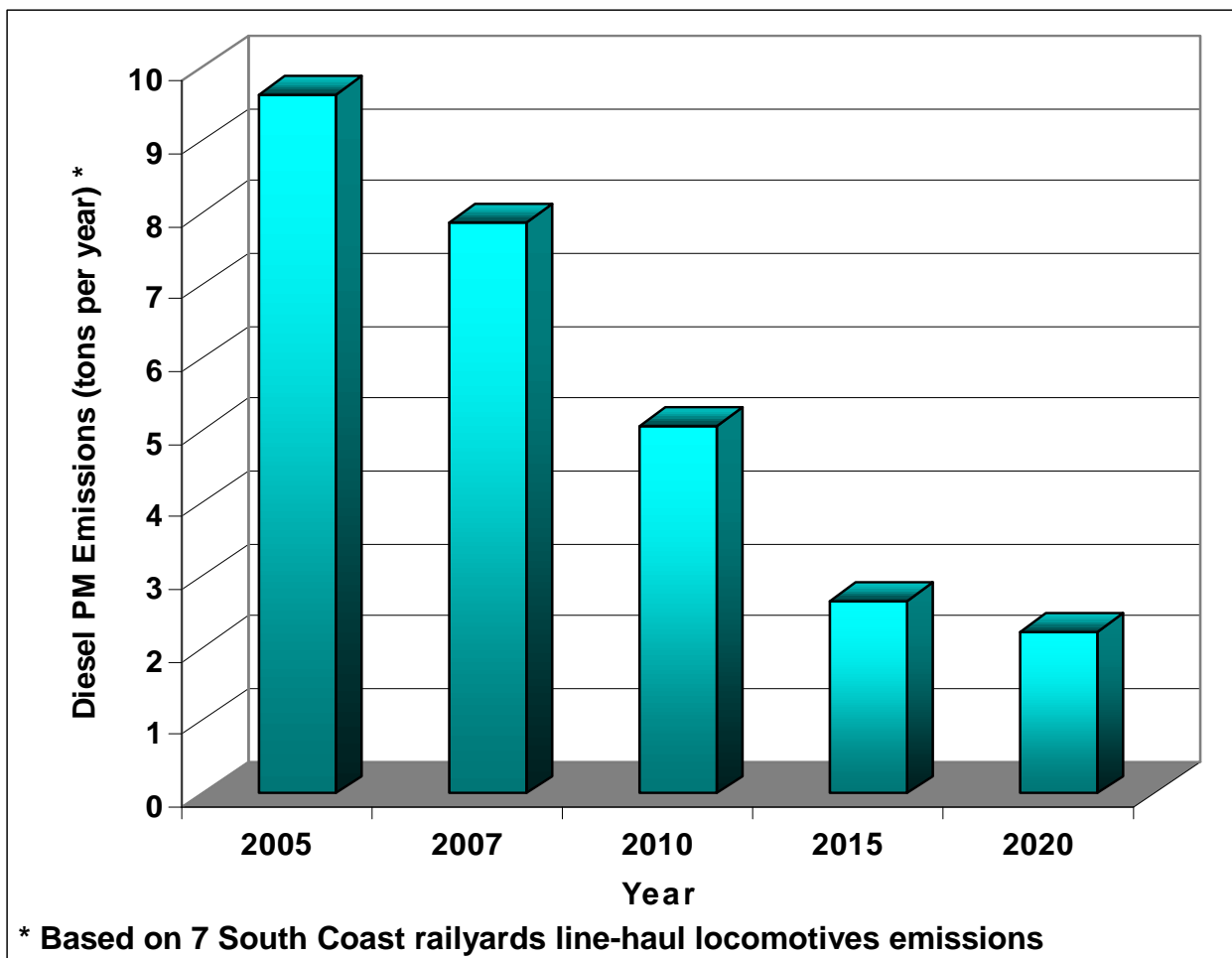
South Coast Railyard Diesel PM Emission Reductions: In Use On-Road Trucks



- In addition to the existing on-road heavy-duty truck regulation.

Progress Report - Potential Measure

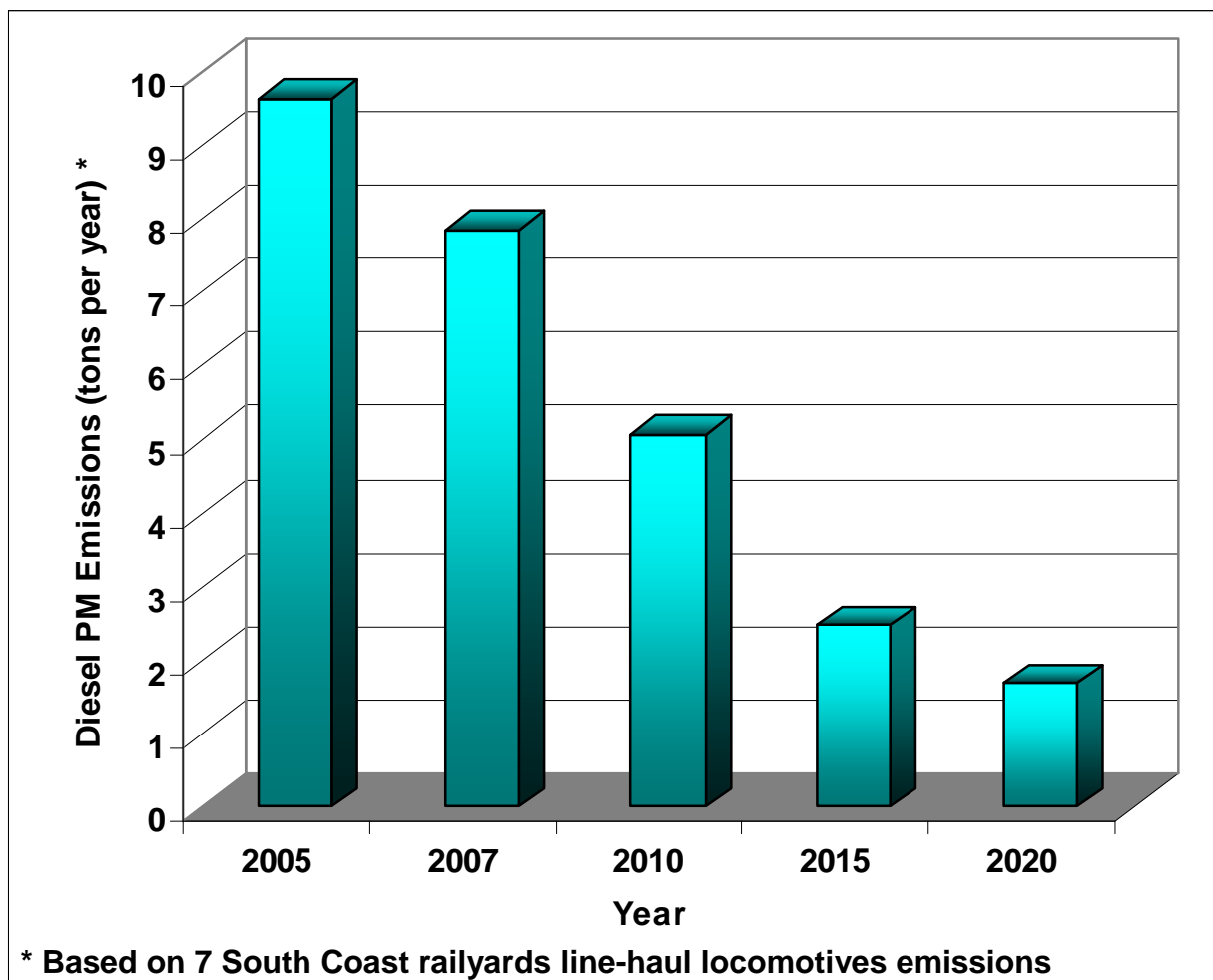
South Coast Railyard Diesel PM Emission Reductions: U.S. EPA Locomotive Rulemaking



- In addition to the existing Line-haul locomotive fleet average agreement.

Progress Report - Potential Measure

South Coast Railyard Diesel PM Emission Reductions: Existing Line-haul Locomotive Aftertreatment Certification



- In addition to the existing Line-haul locomotive fleet average agreement and U.S. EPA Locomotive rulemaking.

Progress Report - Existing + Potential Measures

Total Benefits of the Emission Reductions Measures for the South Coast Railyards

